



Overview of International Opportunities @ the National Science Foundation

Regional Grants Conference
Oklahoma State University
March 19-20, 2007



"International cooperation in science is not a luxury; it is a necessity -- and the foundation for the future."

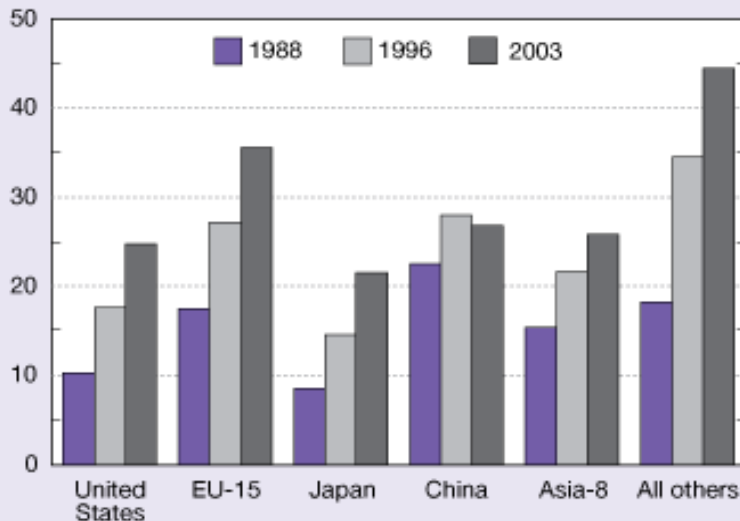
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International Collaboration

Figure O-19
Share of scientific and technical articles with international coauthorship, by country/region: 1988, 1996, and 2003

Percent



EU = European Union

NOTE: Asia-8 includes South Korea, India, Indonesia, Malaysia, Philippines, Singapore, Taiwan, and Thailand.

SOURCES: Thomson ISI, *Science Citation Index and Social Sciences Citation Index*, <http://www.isinet.com/products/citation/>; iPLQ, Inc.; and National Science Foundation, Division of Science Resources Statistics, special tabulations. See appendix tables 5-47, 5-48, and 5-49.

Science and Engineering Indicators 2006

- ❑ International collaboration is commonplace
- ❑ About 20% of the world's scientific and technical articles in 2003 had authors from two or more countries, compared with 8% in 1988
- ❑ One-quarter of articles with U.S. authors have one or more international coauthors, which is similar to the percentages for Japan, China, and the Asia-8.

International Activities

NSF Objectives



- **Advance discovery**
- **Develop a globally engaged US workforce**



NSF International Objectives...

A MEANS for advancing FRONTIER RESEARCH

Provide ACCESS to sites, facilities, people, ideas

BUILD and STRENGTHEN international COLLABORATIONS and institutional partnerships to address problems on a global/regional scale

Prepare a GLOBALLY ENGAGED U.S. S&E workforce

[NSF does NOT have a foreign affairs or foreign assistance mission]



Support for International Activities

- **New proposals to Office of International Science and Engineering**
- **Supplements to existing NSF grants**
- **Part of new proposals to NSF disciplinary programs**

OISE Regional Clusters

- **Africa, Near East, South Asia**
- **Americas**
- **East Asia and Pacific**
- **Europe and Eurasia**
- **Global Initiatives**





OISE Programs

- Developing Global Scientists and Engineers
 - Doctoral Dissertation Enhancement Projects
 - International Research Experiences for Students
- Planning Visits and Workshops
- International Research Fellowship Program
- Pan-American Advanced Studies Institutes
- East Asia and Pacific Summer Institutes
- Partnerships for International Research and Education
- Research Experiences for Undergraduates

Dissertation Enhancement Research



- Supports doctoral student research in a foreign country
- Must be collaborative, with evidence of intellectual involvement of foreign institution
- U.S. faculty mentor is PI on proposal
- Up to \$15,000 per award for up to 2 years
- Apply to NSF disciplinary program or OISE
- **Deadlines: 9/15 and 2/15 annually**



International Research Experiences for Students

- **Can include graduate and undergraduate students**
- **Supports small groups of students in a focused field**
- **Awards of up to \$50,000 per year for up to 3 years**
- **Deadlines: 9/15 and 2/15**



Planning Visits

- **Short trips by US researchers in promising new areas**
- **Fully assess foreign expertise, facilities, equipment, data, experimental protocols, etc.**
- **Detailed preparation for collaborative research**



Workshops

- **Co-organized by U.S. & foreign investigator**
- **Held in foreign country or United States**
- **NSF supports U.S. participants**
- **Identify areas of joint research**
- **Stimulate ideas for future research**



International Research Fellowships

- **Work outside the US for 9-24 months**
- **Re-entry support within 24-month tenure**
- **US citizens or permanent residents not beyond 2 years of Ph.D.**
- **Work in developing countries encouraged**
- **Deadline: 2nd Tuesday in September annually**

Pan-American Advanced Studies Institutes (PASI)



- Short courses of two to four weeks duration, at the advanced graduate and post-doctoral level.
- Courses should involve distinguished lecturers and active researchers in the field, preferably from the Americas.
- PASIs aim to disseminate advanced scientific knowledge and stimulate training and cooperation among researchers of the Americas in the mathematical, physical, and biological sciences, and in engineering fields.

Support for Graduate Students



- **Participation in NSF disciplinary awards**
- **International Research Experiences for Students (IRES)**
- **Graduate Research Fellowships (GRF)**
- **Participation in OISE planning visits or workshops**
- **Dissertation Enhancement Awards**
- **East Asia and Pacific Summer Institutes (EAPSI)**

East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI)



www.nsf.gov/eapsi

Australia, China, Japan, Korea, New Zealand or Taiwan





EAPSI Goals

- **Introduce students to science and engineering in the Asia-Pacific region in the context of a research laboratory**
- **Have students initiate personal relationships that will facilitate future international collaborations**



EAPSI Applicant Eligibility

- U.S. citizen or permanent resident
- Enrolled at U.S. institution in a research oriented master's, M.D. or Ph.D. degree program
- Fields of science or engineering supported by NSF and represented among host institutions
- **December 2007-Application deadline**

Partnerships for International Research and Education (PIRE)



- **Focused research topic**
- **Complementary international partners**
- **Involvement of students & junior researchers**
- **Institutional resources (IT, language/culture, curriculum, study abroad, other)**
- **Innovative models**
- **5-year awards of up to \$2.5M each**

Support for Undergraduate Students



- **Participation in NSF disciplinary awards**
- **International Research Experiences for Students (IRES)**
- **Research Experiences for Undergraduates (REU)**



Research Experiences for Undergraduates

- **Supplements**
- **Sites**



www.nsf.gov/oise

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